

efficiency.

Ultimate perfection in single wafer spin processing



amc
1000

amc
2000

amc
2500

ams
PILOT

design.



Economic, custom-made and comfortable solutions_

amcross single wafer spin coating, developing, lift-off and cleaning equipment is the perfect answer to the manifold challenges that will have to be faced in the microsystems and photolithography industry. Our **amc**-product-line does set new standards with regards to cost-benefit calculation in spin processing: our customers are able to optimize their production processes and so reach best process and product quality at highest cost savings and excellent return on investment.

Here our attractive cost calculation becomes evident. Sophisticated features contribute to a perceptible increase of output – which saves production time, lessens reject and considerably reduces quality related costs. Resist savings of up to 70% and avoidance of test-runs lead to extremely low material costs.

With their extraordinary design, perfected construction and self-explaining **ams** PILOT software, **amcross** machines are configured for maximum user-friendliness and comfortable handling.

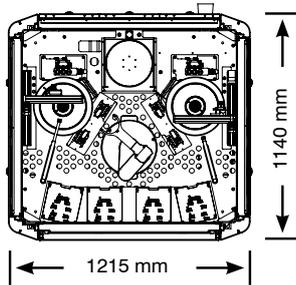
Due to the platform-concept and modular system of **amcross** spin processors our customers will be able to effortlessly realize very different process applications: different processing modules and carriers with various substrate types may be individually combined on the same platform.

BENEFIT

modules.

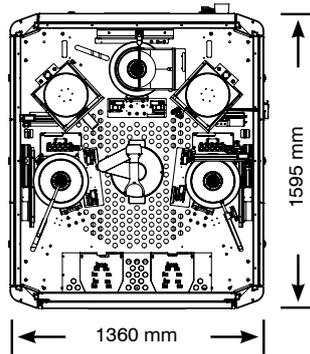
THINKING AHEAD!

With our **amc-series** we will be able to offer individual solutions for substrate coating, developing, lift-off and cleaning. In close cooperation with our customers, we will analyse their individual production and process related needs. Thereupon we will set up their unique amcross machine with the modules chosen by them on one of our three basis platforms. Any future modifications or conversions can be easily realized at any time. You cannot ask for more flexibility – or performance at an equally attractive price!



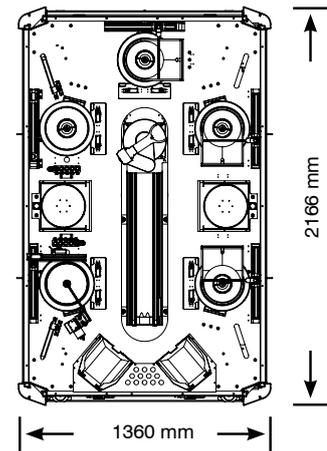
amc 1000

- Wafer diameters: 2" to 8"
- Up to 4 I/O stations for 2" to 6" (max. 4 x open cassettes or 2 x SMIF) or
- Up to 2 I/O stations for 8" (open cassettes or SMIF)
- Max. 3 individual processing modules
- 1 two-link handling robot



amc 2000

- Wafer diameters: 2" to 8"
- Up to 4 I/O stations (max. 4 x open cassettes or 2 x SMIF)
- Max. 5 individual processing modules
- 1 two-link single arm (single end effector) or double arm (double end effector) handling robot



amc 2500

- Wafer diameters: 2" to 8"
- Up to 4 I/O stations (max. 4 x open cassettes or 3 x SMIF)
- Max. 7 individual processing modules
- 1 two-link single arm (single end effector) or double arm (double end effector) handling robot

amc coater module

- // Unique bowl design for optimal process results (e.g. no cotton candy when processing high viscosity resists)
- // Servo-controlled nozzle positioning, programmable with absolute distance values
- // Programmable wafer backside and bowl rinse
- // EBR (Edge Bead Removal) system programmable with absolute distance values, also for rectangular substrates
- // Dispense system for up to 5 different media per bowl with single-nozzle positioning arm and automatic nozzle change
- // Different resist dispense pumps (e.g. syringe, trap tank, etc.) available

amc developer module

- // Spray-, puddle or megasonic development
- // Various developer media per bowl possible
- // Servo-controlled nozzle positioning programmable with absolute distance values
- // Programmable wafer backside, topside and bowl rinse

amc lift-off module

- // Unique lift-off process with large-area megasonic
- // High- or middle-pressure cleaning with DIW or solvents
- // Special reclaim solution for very low media consumption
- // Easy recycling of lifted metals
- // Programmable wafer backside, topside and bowl rinse

amc cleaning module

- // Cleaning of wafer frontside, backside and edge bevel
- // Various cleaning methods as standard solutions available
- // Large-area megasonic

amc temperature module

- // Up to 5 (optional 6) hot- or coolplates per module
- // Standard hotplate (60° - 200°C)
- // High-temperature hotplate (60° - 450°C)
- // HMDS vapor priming hotplate (60° - 200°C)
- // Single or multi-zone hotplate
- // Coolplate (10° - 60°C), with either water or peltier cooling
- // Curing by UV light or supported by UV light
- // Options for proximity control: Fixed proximity, programmable proximity, vacuum contact

amc wafer-handling module

- // „Pick & place“ robot
- // Contactless wafer centring „on-the-move“
- // Slot-scanning including identification of carrier type and wafer size
- // OCR, bar and matrix code support
- // Wafer vacuum or edge gripping

Optional configurations

- // Thin wafer processing
- // Backside coating with automatic flip station
- // Perforated wafer processing
- // Mini environment with temperature and humidity control
- // Resist and developer temperature control
- // Media tempering device to the point of use

key features.

Small features, enormous value_



// **Servo-control:** All desired positions of the dispense and the edge bead removal nozzle are programmable on the X, Y and Z axes. This enables nozzle positioning above the wafer with absolute accuracy as well as dispense in a spiral or meandering movement. Benefit: no time-consuming calibration or test-runs, but extraordinary uniformity and resist savings.

// **Substrate and resist variety:** A great variety of substrate configurations within different carrier types can be handled in parallel during one single process without modification. Slot-scanning even includes the identification of the wafer size and thickness. Our **amc** equipment supports dispense of a broad range of resists with different viscosities.

// **Standard components:** The use of high-quality standard components guarantees an attractive price-performance ratio, manageable costs for spare parts, highest reliability and enables simple multi-vendor-capability sourcing.

// **Transparency and accessibility:** Large front windows as well as transparent and completely removable side doors allow good view into the working area and easy access to the machines' interior.



Modular, flexible and therefore alterable design of the processing surface on one of 3 basis platforms with customizable configurations and applications.



Solvent module for lift-off or resist-strip with innovative positioning arm with single-nozzle grip. Only one nozzle at the time is being carried, which holds two major advantages: on the one hand there is no particle build-up caused by friction because only one tube at the time is being moved. On the other hand, all nozzles not required for the moment remain within the drip pan which prevents the tip of the nozzle from drying out and impedes delayed dripping onto the substrate.

SOPHISTICATED

software.

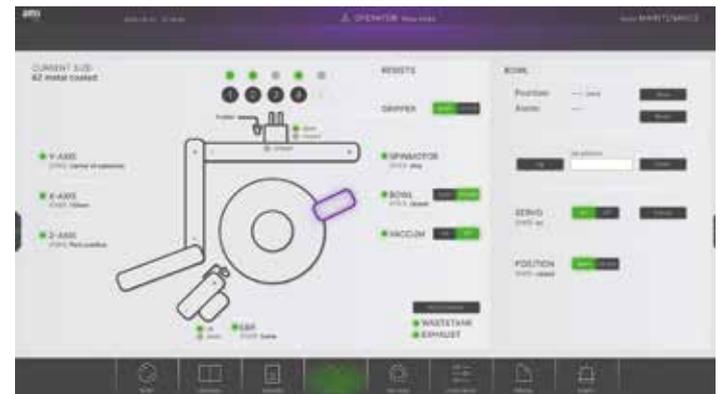
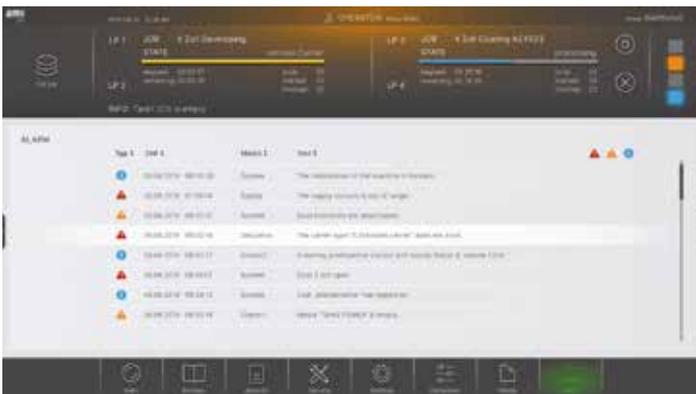
A software with an added value_

Our **ams PILOT** software is the core of our equipment. As an intelligent software-solution with clever and helpful options and features, it contributes to permanent optimization of processes as well as a flexible and smoothly running production due to high-precision system control. With our **ams PILOT** software we came up with a solution complying with Semi-standard E95-1101.

ams PILOT



The user interface does not only win over with its modern and attractive design, but it is also especially user-friendly, self-explanatory and intuitively operable, which facilitates handling of the whole system considerably.



Log-function for informative reporting: The integrated log file consistently generates extensive machine reports for all production lots instead of just producing simple error logs. It is possible to set lot identifications as well as individual storage modes. With only a few mouse-clicks you may see actual as well as older data which may be exported into standard file types.

Service and maintenance: The software supports you with special service functions. So, you will easily be able to find any parts to be serviced. A separate service tablet will help you to operate the software while moving around the equipment. When you are using the tablet, the main screen will be blocked. Remote control is another important feature through which you will be able to configure, teach or service the **amc** tool.

Easy recipe writing: No software programming knowledge is necessary for writing or rewriting individual recipes. It is possible to simply write recipes on your own PC and to afterwards transfer them to the tool via network.

Environmental-friendly: With only one click, the software will reduce the power and media consumption of the whole system – which can also be controlled via timer. One other click brings the tool back into operation. In combination with our intelligent media reduction during processes the customer will be able to continually reduce energy costs.

Integrated scheduling: This is a powerful and very precise tool for the control of the whole process cycle and the course of the individual sequences. The aim will always be an ideal process flow and a maximum possible throughput. Further, manual sequence optimization is possible, e.g. for desired delays.

Client-ability: The logged user will only see information relevant to him. Any confident information will be protected and only be visible to the authorized user.

SECS/GEM interface: Our software is configured to support 200mm and 300mm standard SECS/GEM communication if needed.

Process development: Slot recipe control enables the process engineer to find the correct process parameters by defining variations such as spin-speed media flow or temperature for any given wafer within only one recipe.

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